UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MEMORANDUM

SUBJECT: QA Review of Draft Closure Plan and Draft Sampling and Analysis Plan (QAPP) for Closure of Two Tank Systems and Two Sumps at Northwest Environmental Inc. (NWES) Seattle, WA July, 1994

FROM: Robert G. Melton, Chemist
Office of Quality Assurance (QAO)

TO: Marcia Bailey, RCRA Compliance Manager
Kevin Schanilec, RCRA Compliance Manager

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The Office of Quality Assurance (OQA) appreciates the opportunity to review the above draft Closure Plan and QAPP. The draft documents were reviewed according to Agency guidelines in RCRA SW-846 and in Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans, QAMS-005/80, December 29, 1980. Many sections of the Closure Plan and Sampling and Analysis Plan (QAPP) are well written and provide a good description of proposed QA activities at the site. The OQA does not feel that the following issues were adequately addressed:

It is suggested that the Closure Plan and QAPP be written in document control format, with the revision number and date of page revision on each page of the document. This will facilitate future changes to the document.

The Closure Plan and QAPP lack an approval page for the signature of key NWES managers to approve the documents.

The Closure Plan and QAPP do not provide information on QA Management for the project. Who is responsible for the quality of sampling and analysis data at the site? Who is the NWES Project Manager and QA Manager, and who will perform the sampling and the analysis of samples?

The samples which are designated in the QAPP to be collected do not correlate with the performance standards of the Closure Plan which are described in Section 4.1 of the Closure Plan. This section states the following:

OBJECTIVE #1: Closure of the four operating units is designed to eliminate, minimize, or control, to the extent necessary to protect human health and the environment, postclosure escape of waste constituents, leachate, or contaminated runoff to the ground, surface water, groundwater, or atmosphere.

Closure Plan Section 4.1 states that these goals will be accomplished by removing residues from the OWS Tank and PST and by decontaminating these units and Sumps 2 and 4. The above objective #1 will not be accomplished if the for units have already contaminated the ground, surface water, groundwater, or atmosphere. If these environmental areas and matrixes are already contaminated, then the limited sampling described in the Draft QAPP will not determine if older discharges from the four units have contaminated the ground, surface water, groundwater, or atmosphere. Therefore, the Closure Plan and QAPP do not propose to accomplish objective #1. Please correct this oversight in a revised Closure Plan and QAPP.

Closure Plan Section 2.6, Page 9. This section states that material from oil recycling activities were placed in the OWS tank and PST. It is also stated that hazardous waste was placed in Sumps 2 and 4. The QAPP does not propose to measure these four operating units for components of oil recycling activities and from the processing of hazardous wastes. The Closure Plan and QAPP should require that all samples be measured for TCL organics and TAL inorganics because components from hazardous wastes were placed in all four units. In addition, analytical measurement methods for TCL organics should include special cleanup procedures such as the use of GPC and column chromatograghy to remove oily matrix interferences before SV and pesticide/PCBs are measured in soil extracts.

In addition, Figure 2-2 on Page 7 states that Drum rinsates and Truck tank rinsates were placed in the PST and OWS units. These drums and tank trucks could have contained hazardous wastes and oily wastes. Therefore, the Closure Plan and QAPP should require that all samples be measured for TCL organics and TAL inorganics.

Closure Plan Section 4.2, Page 10. The first sentence of this section is ambiguous. Is the sentence trying to state that all hazardous waste residues will be removed from the surfaces of the four units due to closure activities?

The Closure Plan states that the water rinsates of the units will be analyzed for constituents representative of the type of waste handled by the unit. This analysis requires that all TCL organics and TAL inorganics be measured, because a broad spectrum of undocumented wastes have been handled by the units in the past.

The Closure Plan proposes to collect only one sample beneath each unit. There may have been spills of waste around these

units. The collection of one core sample may not be representative of the soil beneath each unit. The Closure Plan has not documented the lack of surface runoff from these units or seepage to the groundwater. It is suggested that the Closure Plan address these environmental contamination issues. Statistically, a single soil sample beneath the center of a unit does not show that the units have not contaminated the groundwater and surface water and soils surrounding the units. It is suggested that additional soil samples and groundwater samples be taken to document lack of environmental contamination.

Table 4-1 of the Closure Plan does not list other components of hazardous wastes which are expected to be present in the four units, such as carcinogenic PAHs [benzo(a)pyrene (BaP)], PCBs, pentachlorophenol, cadmium, mercury, lead, and bis(2-ethyl)hexylphthalate. Table 4-1 should include the measurement of all TCL organics and TAL inorganics.

The Closure Plan and QAPP have not identified other means of transport from the four units, such as surface water run-off and groundwater contamination. These transport mechanisms should be addressed and investigated in a revised Closure Plan and QAPP.

Closure Plan Section 5.0, Page 12. This section should include more extensive soil sampling and groundwater sampling to document the lack of transport of waste material from the units to the environment.

Closure Plan Section 5.0 does not agree with the objectives stated in Closure Plan Section 4.1.

Closure Plan Section 5.4, Page 14. The measurement of rinsate samples does not prove that surfaces are properly decontaminated. PCB-type wipe tests should also be taken and measured for TCL organics and TAL inorganics in order the document the extent of decontamination. Please include PCB-type wipe tests in a revised Closure Plan and revised QAPP.

The statement on page 15 that Washington State certified labs will be used does not meet Region 10 QA requirements. Washington State labs are certified to measure a limited list of target compounds in NPDES effluents, not in soil samples. NWES must document and approve the following documents from each lab measuring samples from the facility:

1. Laboratory QA Plan
2. SOPs for each measurement procedure and for sample and document control in the lab.
3. Results of recent (within 1 year) Technical Systems Audits for the procedures that the laboratory will perform for this QAPP.
4. Results for WS, WP, and other PE samples for the past five years.

A copy of the Lab QA Plan and SOPs should be submitted to EPA for each laboratory which is supporting the measurement of samples from the site. The Lab QA Plan should be based upon the following EPA document: EPA Region 10 Guidance on Preparation of Laboratory Quality Assurance Plans, EPA 910/9-92-032.

The following elements should be addressed in a Lab QA Plan:

1. Title Page
2. Table of Contents
3. Quality Assurance Policy Statement
4. Ethics Policy on Fraud, Waste, and Abuse
5. Quality Assurance Management
   - 5.1 Organization
   - 5.2 Assignment of QC and QA responsibilities
   - 5.3 Reporting Relationships
   - 5.4 QA Document Control Procedures
   - 5.5 QA Program Assessment Procedures
6. Administrative Organization
7. Personnel Qualifications
   - 7.1 Resumes
   - 7.2 Education and Experience For measurement of Site Samples
8. Facility Description and Capital Equipment
   - 8.1 Instrumentation
   - 8.2 Backup Alternatives
9. Preventive Maintenance
10. Corrective Action
11. Lab Evaluation and Audits
    - 11.1 Management System Reviews
    - 11.2 Technical System Audits
    - 11.3 Performance Evaluation (currently covered)
    - 11.4 Data Quality Audits
12. Quality Assurance Reports To Management
13. Lab Documentation and Forms
14. Sub-Contracting of Services
15. Standard Operation Procedures
    - 15.1 SOP Format
      - 15.1.1 Title Page
      - 15.1.2 Scope and Application
      - 15.1.3 Definitions
      - 15.1.4 Procedures
      - 15.1.5 QC Limits
      - 15.1.6 Corrective Action Procedures including Secondary Review of Information Being Generated
      - 15.1.7 Documentation Description and Example Forms
      - 15.1.8 Miscellaneous Notes and Precautions
      - 15.1.9 References
    - 15.2 Required SOPs
      - 15.2.1 Evidentiary SOP
      - 15.2.2 Sample Receipt and Storage
      - 15.2.3 Sample Preparation

15.2.4 Glassware Cleaning
15.2.5 Calibration
15.2.6 Analytical procedures
15.2.7 Maintenance activities
15.2.8 Analytical Standards
15.2.9 Data Reduction procedures
15.2.10 Documentation policy/procedures
15.2.11 Data Validation/self inspection procedures
15.2.12 Data Management and handling
15.2.13 Quality Assurance and Quality Control

Specify in the Closure Plan the identity of the labs who will measure facility samples in support of the Closure Plan.

Closure Plan Section 5.4, Page 15. The table on this page should be numbered. The List of Parameters of Concern is incomplete. Add TCL organics and TAL inorganics as Parameters of Concern.

Please add to the table SW-846 methods to measure TCL organics and TAL inorganics, such as methods 8270A and 8080A. TCLP extraction using method 1311 should be removed from the table. Instead, inorganic methods to measure TAL inorganics directly in soil, groundwater, surface water, and rinsate water should be added.

Table 5-2, Page 17. Specify in the Closure Plan and QAPP how data quality will be assessed. Specify the use of the following EPA data validation guidelines to assess data quality:

USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (PB-94-963502)

USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (PB-94-963501)

Specify in the Closure Plan who will validate the data submitted to EPA.

Closure Plan Section 6.0, Page 18. Specify that copies of validated lab data will be submitted to EPA.

QAPP Section 1, Page 1-1. The objectives stated do not agree with the objectives stated in Section 2.1 and Section 4.1 of the Closure Plan. Please correct this section.

QAPP Section 2.2, Page 2-1. As is documented, above, rinsing a metal surface with reagent water does not indicate that metal surfaces are clean of organics, especially oily waste organics as were handled in these units. Please have metal surfaces sampled

for TCL organics and TAL inorganics using a PCB wipe sampling method.

QAPP Section 2.3, Page 2-1. The data quality of analytical results must determined through the data validation process as is specified, above.

Table A-1, Page 2-2. The number of samples listed in Table A-1 is inadequate to determine closure of a unit. Additional soil samples must be taken. See comments, above.

> TCL organics and TAL inorganics must be sampled. Delete TCLP Method 1311 from the table. Add Methods 8270A and 8080A to the table.
>
> Add DQOs for each type of sample and method of analysis to Table A-1. Include in the table all PARCC requirements for the Closure Plan, such as the measurement of precision and accuracy.

The Closure Plan and QAPP have not defined the Data Quality Objectives for the Closure Plan. How will precision be measured? The Closure Plan and QAPP have not proposed the collection of duplicate samples or MS/MSD samples, therefore, the documents do not propose to measure precision of sampling and analysis.

QAPP Section 3.2, Page 3-1. The QAPP has not define which or how composite soil samples will be collected. Please specify these details.

Table A-2, Page 4-2. This table is incomplete based upon comments, above.

Table A-3, Page 4-3. The QAPP has not stated Preservation and holding time requirements for rinsate samples or water samples. Also state preservation and holding times for TCL organics and TAL inorganics.

Overall, NWES has not proposed adequate QA procedures or DQOs to measure samples from the waste units at the site. Please have NWES address the comments, above.

Please let us know if OQA can be of additional assistance in helping you meet your objectives for the RCRA Closure Plan at NWES. If you have any questions concerning the above, comments please do not hesitate to contact me at (206) 553-2147.